



# The Opioid Epidemic and the Impact on the Queen City

Dr. Jennifer Mooney  
Director, Family Health Division

# How does addiction happen?

## *Opioids have side effects.*

A person who takes opioids can become **tolerant** to them. This means that more of the drug is needed to obtain its effects. It is also possible to become **dependent** on opioids—to feel sick if there are no opioids in the body. This sickness is called **withdrawal**.

From SAMHSA

# Heroin: 101

- Heroin ("smack", "junk", or "dope") is made from the opium poppy.
- Heroin belongs to a class of drugs known as opioids, along with opium, codeine, morphine, methadone, and oxycodone.
- Long ago, heroin was prescribed or even sold over the counter.
- Heroin is snorted, smoked (chased or mixed with pot), or injected.
- Withdrawal symptoms include diarrhea, stomach cramps, sweating, itching, insomnia, vomiting and nausea.

# Heroin Euphoria



- Heroin users report feelings of warmth, well-being, euphoria, contentment, pain relief, a dreamlike state and dulled emotion.
- Undesirable effects may include appetite loss; nausea and vomiting; constipation; itchiness; sweating; slow, shallow breathing; lowered pulse; unconsciousness.
- Heroin can disconnect you from reality, leaving you vulnerable.

# According to the CDC

- Since 2000, the age-adjusted drug overdose death rate has more than doubled, from 6.2 per 100,000 persons in 2000 to 14.7 per 100,000 in 2014.
- Heroin overdose death rates increased by 26% from 2013 to 2014 and have more than tripled since 2010, from 1.0 per 100,000 in 2010 to 3.4 per 100,000 in 2014

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm>

# Key facts about heroin addiction:

- More than 9 in 10 people who used heroin also used at least one other drug.
- 45% of people who used heroin were also addicted to prescription opioid painkillers.
- Heroin use more than doubled among young adults ages 18–25 in the past decade.
- According to the DEA, approximately 120 people die each day in the United States of a drug overdose.



# Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least **3** other drugs.

**Heroin** is a highly addictive opioid drug with a high risk of overdose and **death** for users.

## People who are addicted to...



ALCOHOL

are

**2x**



MARIJUANA

are

**3x**



COCAINE

are

**15x**



Rx OPIOID PAINKILLERS

are

**40x**

**...more likely to be addicted to heroin.**

SOURCE: National Survey on Drug Use and Health (NSDUH), 2011-2013.

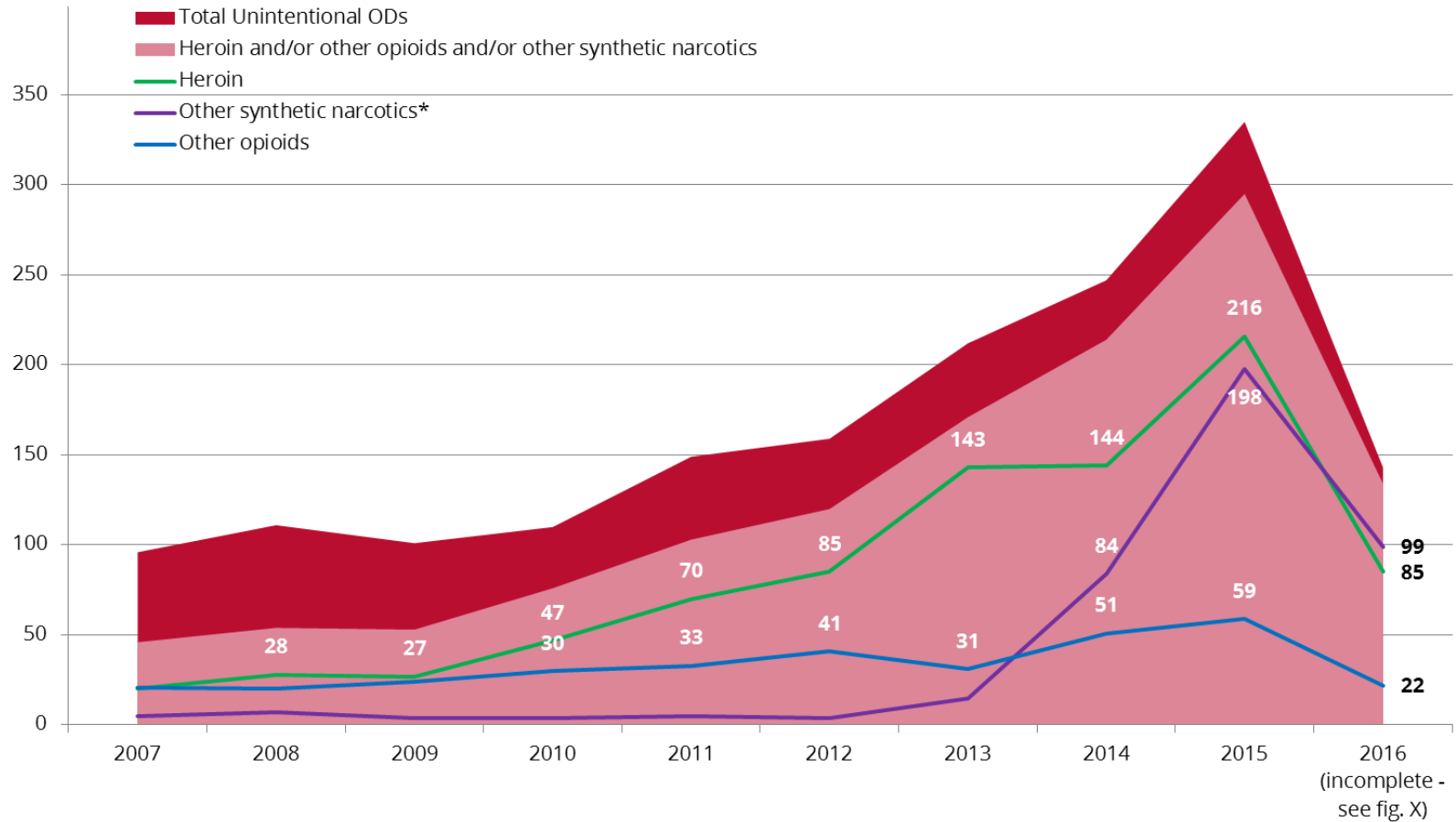
# Why the Recent Rise?

- Pharma and Doctor shopping regulated
- Many folks addicted to pain pills
- Need to avoid withdrawal
- Turn to the black market
- Eventually turn to injection



# HCPH Data: Kevin Strobino, MPH

## Death due to Unintentional Overdose, by select drugs; Hamilton County, 2007-16





## HAMILTON COUNTY HEROIN COALITION

# ED Visits and Emergency Response due to Drug Overdose:

Daily Surveillance Report for **March 2, 2017**

Data compiled cooperatively by Hamilton County Law Enforcement, Public Health, and Fire/EMS agencies

Estimated Overdose Hospital Visits<sup>1</sup> for March 2:

9

Estimated Fire/EMS and Law Enforcement Overdose Emergency Responses<sup>2</sup> for March 2:

7

### Drug Overdoses\* by Patient's ZIP code\*\*; February 24 - March 2, 2017

ZIP Code	Number	Percent***
45205	5	6%
45238	5	6%
45211	4	5%
45212	3	4%
45219	3	4%
45230	3	4%
45239	3	4%
45241	3	4%
41042	2	2%
45102	2	2%
TOTAL	82	100%

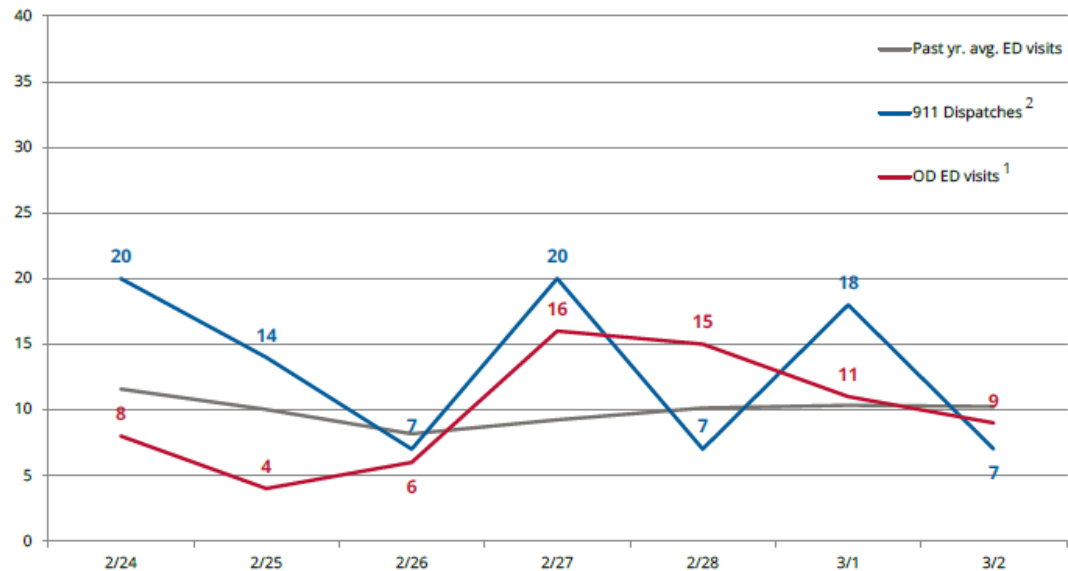
### Drug Overdoses\* by Sex; February 24 - March 2, 2017

Sex	Number	Percent***
Female	33	39%
Male	51	61%
TOTAL	84	100%

### Drug Overdoses\* by Age; February 24 - March 2, 2017

Age	Number	Percent***
Younger than 18	4	5%
18-24	12	15%
25-34	25	30%
35-49	29	35%
50-64	12	15%
65 and Older	-	-
TOTAL	82	100%

### Drug Overdoses for week of February 24 - March 2, 2017



1. Drug overdose data are retrieved from the state's EpiCenter surveillance tool. "Overdose" cases include all ED visits to Hamilton County hospitals in which drugs were indicated as reason for visit. Cases were included in analysis if the case notes for the patient included the term "overdose" or "OD." Where specified, traumatic injuries due to drugs caused by suicide attempts, adverse reactions to normal medications, or accidental overdose of over-the-counter or common drugs such as Tylenol or insulin were excluded from analysis. ZIP codes refer to the ZIP code of residence of the patient visiting the emergency department (ED). Dates are defined as 6 a.m. of a day to 6 a.m. of the following day, which more accurately reflects drug use patterns than standard day intervals. For example, January 1st refers to the period of 6 a.m. on January 1st to 6 a.m. on January 2nd.

Data from the EpiCenter surveillance tool is subject to at least 2 limitations. First, case notes in the EpiCenter tool are limited and often do not include full details of ED visit, such as drug used or intent of use. As such, overdose estimates will include not just opioids, but potentially any drug. Second, case notes are recorded at patient intake and may change from a patient's initial examination to their final diagnosis.

2. Emergency dispatches refer to fire/EMS and law enforcement responses to 911 emergency calls related to drug overdose, in which a unit was dispatched. Call notes are reviewed and included/excluded using the same criteria as EpiCenter, adapted for the format of 911 dispatch call logs.

\* Demographics reported from hospital & ED visits (red line), and do not include demographic information from 911 dispatches (blue line).

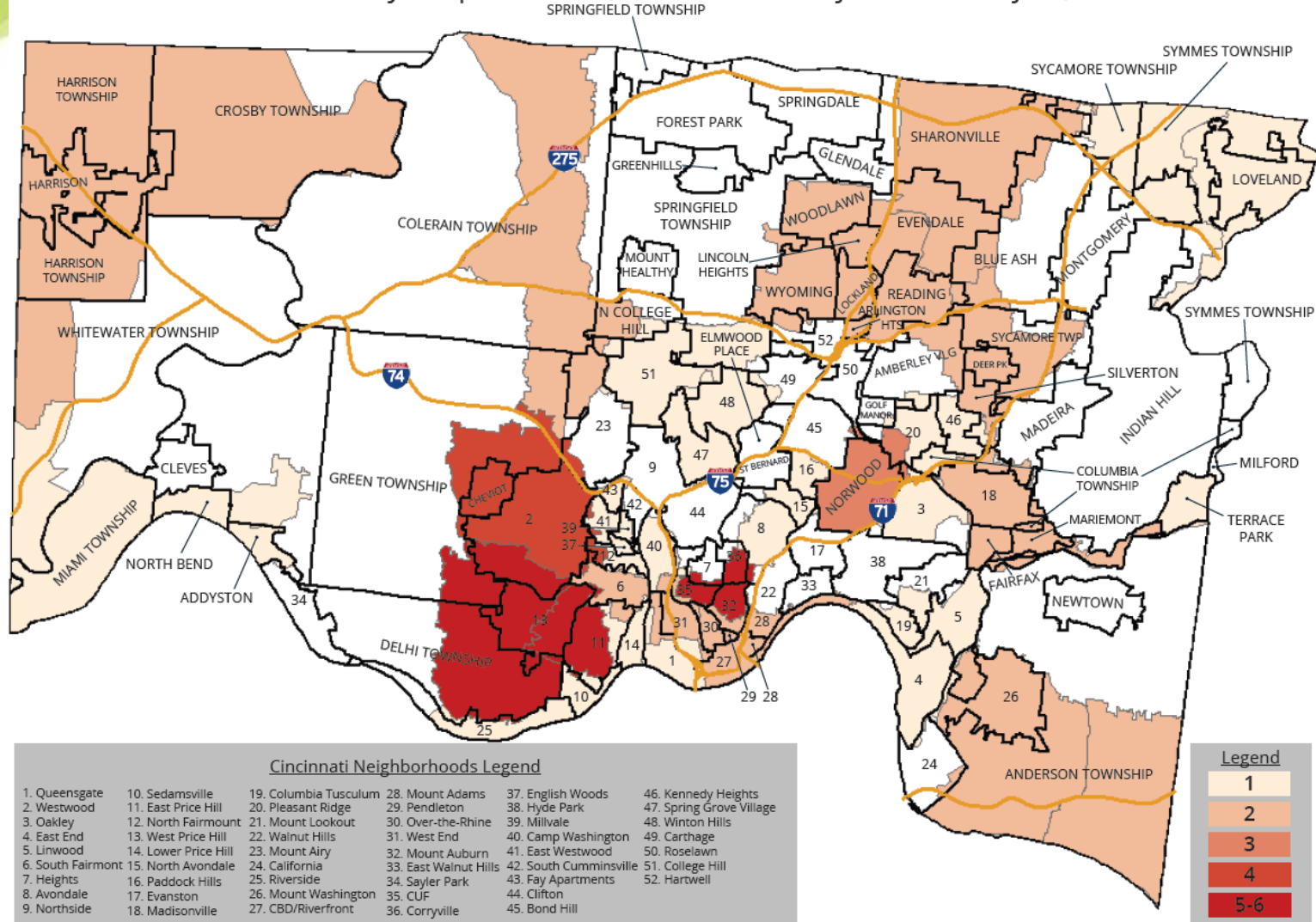
\*\* Ten most frequent ZIP codes displayed; if more than 10 ZIP codes reported in a day, percentages will not add to 100 and ZIP codes beginning '452' are given highest precedence for inclusion over other ZIP codes.

\*\*\* Percent among those who do not have missing information for the respective demographic factor.

For any questions, contact: Kevin Strobino, MPH; Epidemiologist at HCPH; 513-946-7620; kevin.strobino@hamilton-co.org.

# HCPH Surveillance Data: Kevin Strobino, MPH

Home ZIP Code of Drug Overdose Hospital ED Patients;  
Hamilton County Hospitals & EDs, Week of February 22 - February 28, 2017



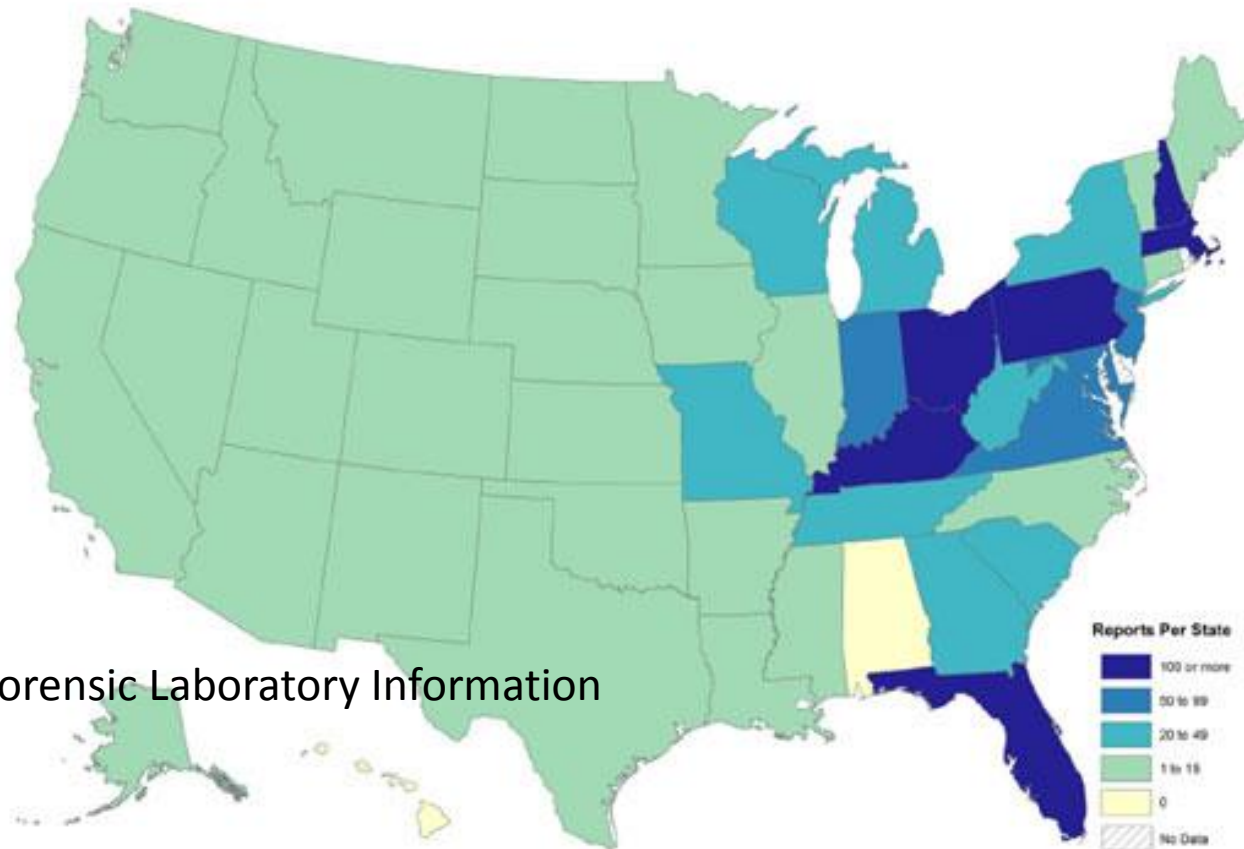
Why is heroin today  
different than prior drug  
waves in the past?

# Overdose

- Not just your run of the mill heroin anymore.
- **Fentanyl** (aka fentanil) is a potent, synthetic opioid pain medication with a rapid onset and short duration of action. 80 times the potency of morphine (CDC, 2016).
  - Used right after surgery and as part of anesthesia
- **Carfentanil**: an analog of the synthetic opioid analgesic fentanyl. It is 10,000 times more potent than morphine, making it among the most potent commercially used opioids.
  - Used on large animals such as elephants. (CDC, 2016).

# Fentanyl reports in NFLIS, by State

## July – December 2014



National Forensic Laboratory Information  
System

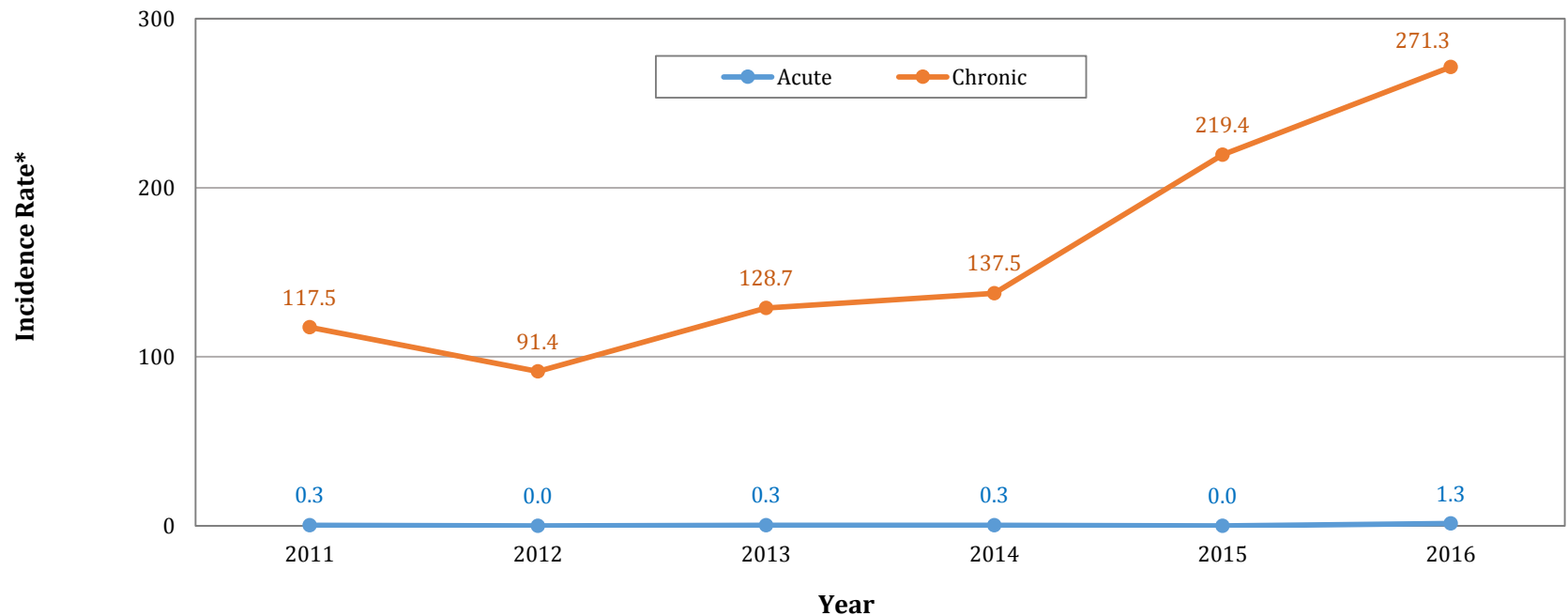
# Communicable Disease

- Primary concern for Hepatitis C Virus (HCV) and HIV.
  - **IV drug users and individuals with multiple sex partners are at greater risk.**
- Transmitted by:
  - Sharing needles and syringes.
  - Sharing cookers, cotton and rinse water.
  - Not using a condom or barrier during sex.
  - You increase your chances of getting HIV/HCV if you have unprotected sex with: Someone who has several sex partners or someone who injects drugs
- Hepatitis C has increased. HIV has been stable.



# Hepatitis C

**Figure 1: Annual Rate of Hepatitis C Cases Reported for City of Cincinnati Residents by Type, 2011-2016**



Annual rate of newly reported infections per 100,000 residents of Cincinnati (based on confirmed or probable cases reported to the City of Cincinnati Health Department).

**Data Sources:** The number of cases comes from the Ohio Disease Reporting System and the population of the City of Cincinnati comes from the US Census Bureau, single year population estimates.

# Communicable Disease:

## City of Cincinnati

- For acute hepatitis C, the 2016 incidence rate was more five times higher than the 2011-2015 average.
- The 2016 incidence rate for chronic hepatitis C was 24% higher than the 2011 rate and 96% higher than the 2011-2015 average.

# Pregnancy and Infant Birth Outcomes

- Universal testing for women delivering in Cincinnati/Hamilton County.
  - Prior to this testing done but based on profiling of women.
- Increase in identified cases of Neonatal Abstinence Syndrome (NAS) – due to screening.
- Not meant to be punitive, but infants can get the care they need if exposed.

# DRAMATIC INCREASES IN MATERNAL OPIOID USE AND NEONATAL ABSTINENCE SYNDROME

THE USE OF OPIOIDS DURING PREGNANCY CAN RESULT IN A DRUG WITHDRAWAL SYNDROME IN NEWBORNS CALLED **NEONATAL ABSTINENCE SYNDROME (NAS)**, WHICH CAUSES **LENGTHY** AND **COSTLY** HOSPITAL STAYS. ACCORDING TO A NEW STUDY, AN ESTIMATED **21,732 BABIES** WERE BORN WITH THIS SYNDROME IN THE UNITED STATES IN 2012, A **5-FOLD INCREASE** SINCE 2000.

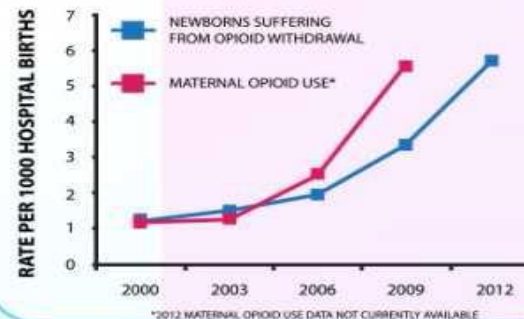


**EVERY 25 MINUTES,  
A BABY IS BORN SUFFERING  
FROM OPIOID WITHDRAWAL.**

## AVERAGE LENGTH OR COST OF HOSPITAL STAY



## NAS AND MATERNAL OPIOID USE ON THE RISE



# What is being done?



# Public Health Crisis = Public Health Response

- Hamilton County Heroin Coalition
- Taskforces – regional
- Syringe Exchange Project
- Hospital reports on ED overdoses
- Naloxone (Narcan) distribution to fire, police, health systems
- Medication Assisted Therapy (MAT)
- Pregnancy prevention/screening
- Funding requests
- Daily monitoring and tracking: OD, ED, Death

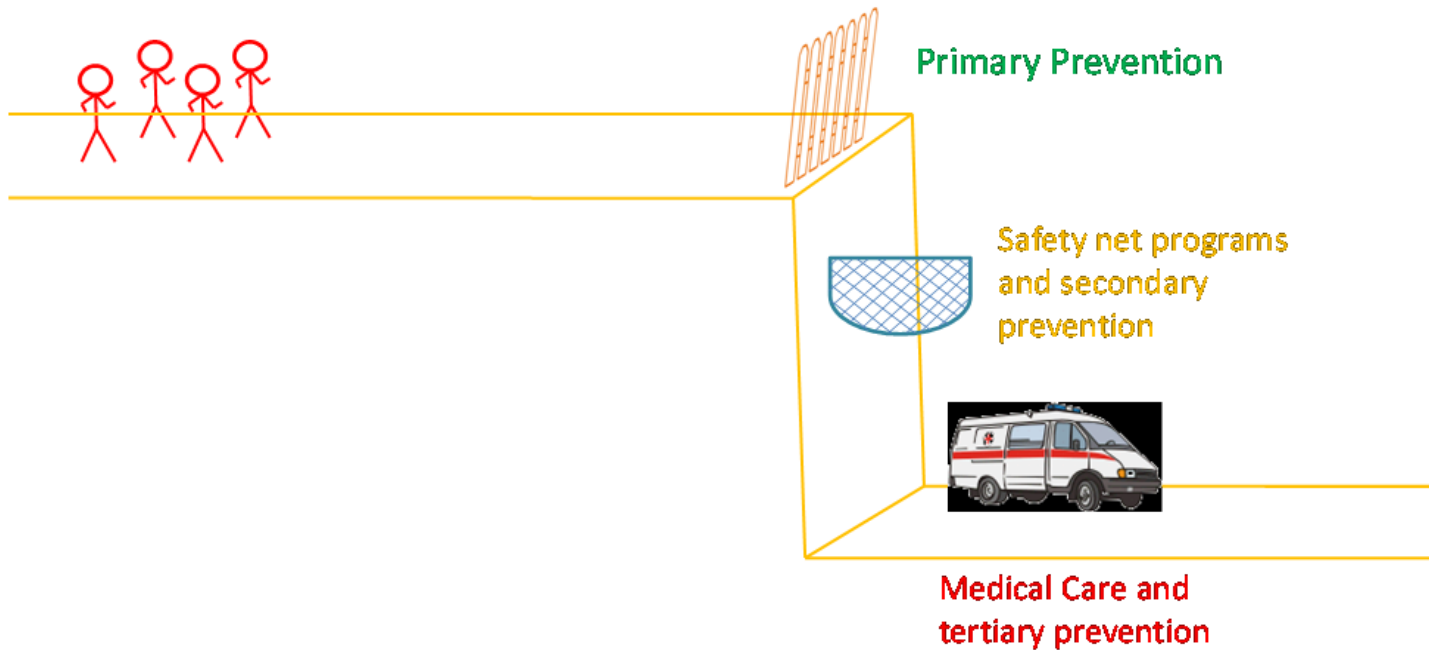
# Social Determinants of Health

- The social determinants of health (SDH) are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. World Health Organization (WHO)



## Social determinants of health

## Current medical model



# Cincinnati Police and Fire

- Struggle with
  - Fatigue
  - Resource availability
  - Role/identity confusion – morale and public perception
  - Legal challenges and changes
  - Exposure to infections
  - Quick Response Teams (QRT) resources
  - Data collaboration and dissemination of findings

# Hamilton County Public Health

- Regular monthly meetings
  - Identifying challenges
  - Collaboration on epidemiology
- Healthcare Subcommittee
- Harm Reduction Subcommittee
- Childhood Outreach Subcommittee
- Poison Death Review

# Evidence Based Practice (EBP)

- Expansion of Naloxone (Narcan) to additional settings
- EBP is nebulous with this new epidemic –
  - The good: variety of modalities available in Hamilton County (outpatient, MAT, 28 day inpatient, long-term residential, detox)
  - The challenge: the nature of this new addiction trajectory has tasked traditional models
- MAT: buprenorphine, methadone, naltrexone (aka Vivitrol)
  - Variety of responses to each, comfort level of prescribing clinician
- MAT should always include behavioral modification and individual counseling components.

# Cincinnati Exchange Project (CEP)

- Successfully exchanges over 15,000 syringes (1:1 ratio) per month
- Referral to treatment (10% linked to treatment) – higher than national average
- Requires sustainability plan –
  - Necessary program to reduce risk for HCV and HIV transmission
  - Necessary to identify pregnant women to reduce NAS potential and further trauma to families
  - Necessary to identify newly infected with HCV and HIV
  - Necessary to link to primary care physician and dental provider

# Supporting Behavioral Health in Primary Care

- Cincinnati Health Department Federally Qualified Health Centers (FQHCS)
  - Using HRSA grant dollars to secure social work services from Behavioral Health Partners
    - Greater Cincinnati Behavioral Health (GCBH)
    - Talbert House
    - Children's Home
  - Consistently screening using:
    - Screening. Brief Intervention. Referral to Treatment (SBIRT) Model in primary care.
    - CRAFFT behavioral health screening tool for anyone under age of 21
    - The Patient Health Questionnaire (PHQ-9) depression screening
  - Provider and administrator training on prescribing practices, SBIRT

# Priorities - Reducing Potential Spread of Disease

- Hierarchy of Harm Reduction:
  - Reduce risk of transmission of communicable disease, as to prevent an epidemic.
    - Syringe Exchange reduces threat of disease
  - Reduce incidence of injection drug use
  - Reduce use of street drugs
  - Reduce use of prescribed drugs
  - Increase abstinence from drug use



# Medication Assisted Therapy (MAT)

- According to SAMHSA (Substance Abuse and Mental Health Services Administration), Medication-assisted treatment (MAT), including opioid treatment programs (OTPs), combines behavioral therapy and medications to treat substance use disorders.

# Types of MAT

- **Opioids:** **Methadone** (Dolophine<sup>®</sup>, Methadose<sup>®</sup>), **buprenorphine** (Suboxone<sup>®</sup>, Subutex<sup>®</sup>, Probuphine<sup>®</sup>), and **naltrexone** (Vivitrol<sup>®</sup>) are used to treat opioid addiction.
- Acting on the same targets in the brain as heroin and morphine, **methadone and buprenorphine suppress withdrawal symptoms and relieve cravings.**
- Naltrexone **blocks the effects of opioids at their receptor** sites in the brain and should be used only in patients who have already been detoxified.
- All medications help patients reduce drug seeking and related criminal behavior and help them become more open to behavioral treatments.
- National Institute on Drug Abuse (NIDA)

# Responding to the Heroin Epidemic



## **PREVENT** People From Starting Heroin

### **Reduce prescription opioid painkiller abuse.**

Improve opioid painkiller prescribing practices and identify high-risk individuals early.



## **REDUCE** Heroin Addiction

### **Ensure access to Medication-Assisted Treatment (MAT).**

Treat people addicted to heroin or prescription opioid painkillers with MAT which combines the use of medications (methadone, buprenorphine, or naltrexone) with counseling and behavioral therapies.



## **REVERSE** Heroin Overdose

### **Expand the use of naloxone.**

Use naloxone, a life-saving drug that can reverse the effects of an opioid overdose when administered in time.

SOURCE: CDC Vital signs, July 2015

# What we still don't know:

- Long term effect on children living with heroin users
  - Trauma
- Extent of folks dying at home versus ED
  - Real time data unavailable
- How many analogs of Fentanyl exist
- Infectious diseases unidentified
- Extent of Responder fatigue

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